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FIGURE 1A

GAGCCGGTGGCGCAGGTGTCGGGGTCCTCGAGCGCCAGCCTGGGAGCATGATTGTGGACAAGCTGCTGGACGAC
AGCCGCGGCGGAGAGGGGCTGCGGGACGCGGGCGGGCGGCTGCGGCCTCATGACCAGCCCGCTCAACCTGAGCTAC
TTCTACGGCGCGTCGCGCGCCCGCGCCCGCGGGCGCCTGCGACGCCAGCTGCTCGGTCTTGGGCCCCCTCGGCG
CCCGGCTCGCCCGGCTCCGACTCCTCCGACTTCTCCTCTGCTCGTCTGCTCGGTGCTCCTCTGCGGCGCCGTGGAGTCC
CGGTCGAGAGGCGGCGCCCGCGCGGAGCGCCAGCCAGTTGAGCCCCATATGGGGGTGGCAGGCAGCAGAGAGGC
CCCTTTCAAGGTGTTCTGGGTAAAGAACTCAGTGAAGGAACCTCTGTTGCACATCCGAAGTCATAAACAGAAGGCT
TCTGGCCAAGCTGTGGATGATTTTAAGACACAAGGTGTGAACATAGAACAGTTTCAAGAAATGAAGAACACAGTA
TCATACAGTGGGAAAAGGAAAGGGCCCGATTCTGTTGTCTGATGGACCTGCTTGCAAAGGCCAGCTCTGTTGCAT
TCCCAATTTTTGACACCACCTCAAACACCAACGCCCGGGGAGAGCATGGAAGATGTTTCATCTCAATGAACCCAAA
CAGGAGAGCAGTGCTGATCTGCTTCAGAACATTATCAACATTAAGAATGAATGCAGCCCCGTTTCCCTGAACACA
GTTCAAGTTAGCTGGCTGAACCCCGTGGTGGTCCCTCAGAGCTCCCCCGCAGAGCAGTGTCAGGACTTCCATGGA
GGGCAGGTCTTTTCTCCACCTCAGAAATGCCAACCAATTCCAAGTCAGGGGCTCCCAACAAATGATAGACCAGGCT
TCCCTGTACCAGTATTCTCCACAGAACCCAGCATGTAGAGCAGCAGCCACACTACACCCACAAACCAACTCTGGAA
TACAGTCTTTTCCCATACCTCCCCAGTCCCCCGCTTATGAACCAACCTCTTTGATGGTCCAGAATCACAGTTT
TGCCCAAACCAAGCTTAGTTTTCCCTTCTTGGTGATCAAAGGGAATCTGAGAATATTGCTAATCCCATGCAGACT
TCCTCCAGTGTTTCAGCAGCAAAATGATGCTCACTTGCACAGCTTCAGCATGATGCCCAGCAGCGCTGTGAGGCC
ATGGTGGGGCAGCAGATGGCCTCTGACTCTTCAAA CACTTCACTGCCATTCTCAAACATGGGAAATCCAATGAAC
ACCACACAGTTAGGGAAATCACTTTTTTCACTGGCAGGTGGAGCAGGAAGAAAGCAAATTTGGCAAATATTTCCCAA
GACCAGTTTCTTTCAAAGGATGCAGATGGTGACACGTTTCTTCATATTGCTGTTGCCCAAGGGAGAAGGGCACTT
TCCTATGTTCTTGCAAGAAAGATGAATGCACCTTCAATGCTGGATATTAAAGAGCACAAATGGACAGAGTGCCTTT
CAGGTGGCAGTGGCTGCCAATCAGCATCTCATTGTGCAGGATCTGGTGAACATCGGGGCACAGGTGAACACCACA
GACTGCTGGGGAAGAACACCTCTGCATGTGTGTGCTGAGAAGGGCCACTCCAGGTGCTTCAGGCGATTTCAGAAG
GGAGCAGTGGGAAGTAATCAGTTTGTGGATCTTGAGGCAACTAACTATGATGGCCTGACTCCCTTCACTGTGCA
GTCATAGCCCAATGCTGTGGTCCATGAACCTCAGAGAAATCAACAGCCTCATTCACCTGAAGTTTCAGGAGCTT
TTACTGAAGAATAAGAGTCTGGTTGATACCATTAAAGTGCCTAATTCAAATGGGAGCAGCGGTGGAAGCGAAGGAT
CGCAAAGTGGCCGCACAGCCCTGCATTGTCAGCTGAAGAAGCAAATCTGGAACCTATTCGCCTCTTTTTGGAG
CTGCCCAGTTGCCTGTCTTTTGTGAATGCAAAGGCTTACAATGGCAACACTGCCCTCCATGTTGCTGCCAGCTTG
CAGTATCGGTTGACACAATTAGATGCTGTCCGCCTGTTGATGAGGAAGGGAGCAGACCCAAGTACTCGGAACCTG
GAGAACGAACAGCCAGTGCATTGTTTCCCGATGGCCCTGTGGGAGAACAGATCCGACGTATCTGAAGGGAAAG
TCCATTTCAGCAGAGAGCTCCACCGTATTAGCTCCATTAGCTTGGAGCCTGGCTAGCAACACTCACTGTCAAGTTAG
GCAGTCTGATGTATCTGTACATAGACCATTGCTTATATTGGCAAATGTAAGTTGTTTCTATGAAACAAACAT
ATTTAGTTCACTATTATATAGTGGGTTATATTAAGAAAGAAAGAAAGAAATATCTAATTTCTTGGCAGATTTG
CATATTTTCATACCCAGGTATCTGGGATCTAGACATCTGAATTTGATCTCAATGGTAACATTGCCTTCAATTAACA
GTAGCTTTTGAGTAGGAAAGGACTTTGATTTGTGGCACAAAACATTATTAATATAGCTATTGACAGTTTCAAAGC
AGGTAAATTGTAAATGTTTCTTTAAGAAAAAGCATGTGAAAGGAAAAAGGTAAATACAGCATTGAGGCTTCATT
GGCCTTAGTCCCTGGGAGTTACTGGCGTTGGACAGGCTTCAGTCATTGGACTAGATGAAAGGTGTCCATGGTTAG
AATTTGATCTTTGCAAACCTGTATATAATTGTTATTTTTTGTCTTAAAAATATTGTACATACTTGGTTGTTAACAT
GGTCATATTTGAAATGTATAAGTCCATAAAATAGAAAAGAAACAAGTGAATTGTTGCTATTTAAAAAAATTTTACA
ATTCTTACTAAGGAGTTTTTATTGTGTAATCACTAAGTCTTTGTAGATAAAGCAGATGGGGAGTTACGGAGTTGT
TCCTTTACTGGCTGAAAGATATATTCGAATTGTAAAGATGCTTTTCTCATGCATTGAAATTATACATTATTGT
AGGGAATTGCATGCTTTTTTTTTTCTCCCGAGACAGGGTCTTGCTCTGGCGCCAGGCTGGAGTACAGTGG
CATGATCTTGGCTCACTTCAGCCTTGACTTGGGCTCAAGTGATCTCTACCTGAGCCTTCTGAGTAACTGGGAC
TACAGGTGTGCACTCCTCGCTGGCTAATTTTTTA TTTTGTACAGGCAGGATCTTGCCACCTTGCCAGGCTG
GTCTTGAACCTCTGAGCTCATGCCATCTGCCTGCC TTAGTCTCCCAAAATGCTGGGATTACAGGAGTGAGCCACC
ATGCCCGGCTGGCAGTTGCATGGAAGAGAACCTCTTATGGCTTACCCTCTAGAATTTCTAATTTATGTGTTT
TGTTGAAATTTTTGTTTTTTTACCTTTATTGAAACAACAAAAAGTCAGTATTGAAACATATCTTCTGTTTTCTG
TTGTCAAATGATGATAATGTGCCATGATGTTTTATATATATCATTCAGAAAAAGTTTTATTTTTTAATAACATTC
TATTAACATTATTTTGCTTGCCGCTGGCATGCCTGAGGAATGTATTTGGCTTTGATTACACACTAAGTTTTTGTA

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FIGURE 1B

ATAAATTTGACTCATTAAAAACCTTTTTTTTTTAAAAAAAAAAAAAGAAAATCTCATTAGTGAACCTTATCTTTG
CAGCTGAGTACTTAAATTCTTTTTAAAAAGATACCCTTTGGATTGATCACATTGTTTGACCCAGTATGTCTTGTA
GACACGTTAGTTATAATCACCTTGTATCTCTAAATATGGTGTGATATGAACCAGTCCATTACATTGGAAAACT
GATGGTTTTAAATAAACTAATTCATAAAAAAAAAAAAAAA

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FIGURE 2

MIVDKLLDDSRGGEGLRDAAGGCGLMTSPLNLSYFYGASPPAAAPGACDASCSVLGPSAPGSPGSDSSDFSSASS
VSSCGAVESRSRGGARAERQPVEPHMGVGRQQRGPFQGV RVKNSVKELLHIRSHKQKASGQAVDDFKTQGVNIE
QFRELKNTVSYSGKRKGPDSLSDGPACKRPALLHSQFLTPPQTPTPGESMEDVHLNEPKQESSADLLQNIINIKN
ECSPVSLNTVQVSWLNPVVVPQSSPAEQCQDFHGGQVFSPPQKCQPFQVRGSQQMIDQASLYQYSPQNQHVEQQP
HYTHKPTLEYSPPFPIPPQSPAYEPNLFDGPEQFCPNQSLVSLLDQRESENIANPMQTSSSVQQQND AHLHSFS
MMPSSACEAMVGHEMASDSSNTSLPFSNMGNPMNTTQLGKSLFQWQVEQEESKLANISQDQFLSKDADGDTFLHI
AVAQGRRALSYVLARKMNALHMLDIKEHNGQSAFQVAVAAHQHLIVQDLVNIGAQVNTTDCWGRTPLVCAEKGH
SQVLQAIQKGAVGSNQFVDLEATNYDGLTPLHCAVIAHNAVVELQRNQPHSPEVQELLLKNKSLVDTIKCLIQ
MGAAVEAKDRKSGRTALHLAAEEANLELIRLFLELPSCLSFVNAKAYNGNTALHVAASLQYRLTQLDAVRLLMRK
GADPSTRNLENEQPVHLVDPGVPVGEQIRRILKGKSIQQRAPPY

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FIGURE 3

ACTCATTATATACCAGGAAAACAGACAAGAGAACAAGAGGCTGCCGAAGACAAAACCTTCTCTGCAAGCACCTGTGCA
CAGCAATGTGCGTGGGCATCTGTGAGAAGAAGAGAATCTGTGAAGTTTGAGCAAGCGGCCTTCCCAAGATGTACC
GAATATCTCAACTGATGTCAACACCAGTAGCAAGTTCTTCCAGGTTGGAAAGAGAATATGCTGGAGAGCTGTCTC
CCACGTGCATTTTCCCAAGTTTACCTGTGATTCCCTGGATGGTTACCATTCTTTTGAATGCGGCTCCATAGATC
CCCTGACAGGCTCCCACTATACCTGTGCGCGAAGTCCCAGACTCCTCACCAATGGCTACTATATTTGGACTGAAG
ACAGCTTCCTGTGCGACAAAGATGGCAACATAACTCTGAACCCATCCCAGACCAGCGTTATGTATAAGGAGAACT
TAGTTAGTACCTCCAAATCTTGGCTGCATGGAAGTATCTTTGGTGACATCAACTCTTCTCCAAGTGAAGACAAC
GGTTGAAGGGGACCAGGAGGTTGGACACAGACCATTGCAATGGAAATGCAGATGATTTAGACTGTTCTTCTCTGA
CTGATGACTGGGAGTCAGGGAAGATGAATGCAGAGTCTGTGATCACCTCCTCTTCCAGCCACATCATATCTCAGC
CTCCTGGAGGAACTCCCATAGCTTGTCTCTTCAGTCCCAGTTGACAGCTTCTGAACGTTTCCAAGAGAATAGTT
CGGATCATTACAGAAACCAGGTTGTTGCAAGAGGCTTCTTTTCAGGCAATCCTGCTTGCTGTGTGCTTAATCACTT
CTGTCATGTGCAAGATGGTTTATGGGAGAAATATTAGCCAGTGTCTTCACATGCTCATTGATGATAACTGTAGCTT
ATGTGAAATCATTGTTTCTCAGCCTTGCCAGCTATTTCAAACCACTGCCTGTGCTCGGTTTGTCAAATTTGAC
AACCATTTAGGAATGCCTTCGATGAATGTCCTCCATCTGAATATCTGGAAATTGTCCAACCTTGCAGTCTACTTGG
AATCAAGTGTTTTATTGGAAGGGAGTAAGCGAGTAATGGAGAAAAAGCCATTTTAGTTTGAATATGTGATTTTAA
AATGATCTCAGTTTTTCCATCAAATTATAATATGCTCATGAAAAATAATATTAATTTGCCTTCCCTTTGCAAACA
CCGGCAGTTGAAAGGAAAAGGACGGGGAATGTGATGGAAAAGAGACCGCCTGGAATAAATGTCCCCCTATGATTC
TTTAAGGCAGTGGTTTCTCGAGCTTGAATTTTCATTAGGAAATCTGTGAGGAGCTTGTAACCAGATTTCTGGGTC
TGCCACATGCACCTATCTCTTGCTGAATTGCTTTAATAGAATAATGAGAGCAAGTTTGTCTAACTAATAACCAACC
TGACAACTTGAATAACAATAAATGCAATTTGTACATAAAAATATAATGCTGCAAAAGTTTGTCAATTCACCTCAGTG
GAGTGACTTGATATTAGGTGGTAACCGTAGATGATGGTTAATATGAAAATGGACAGGAAAGAAGCATTTTCTGAA
AGTTATATTCTTTTGAACCACGTTCTAAACCAAGTTTTTAATCTTCTTGGGGCTCGTAATTACCTTTCACTTTAA
TGTCACTTAAAGATATAACACAGAAAAATGCCTTGAGGGCAAAATATAGGCAAAACACCAATGCGCTTTCAAATG
CATGAAAATGGTGCAGTTGTACCTTGAGCCTTGACTCAAGGGCTGTAGATGTTCCCTTTCCACCCCCACACTT
GGTGCGTGTTACAAAGCAAATATGGCCTGTAATTCAAATTTGTTCTATGTGATACTCTCTGAGTAAAAACTCAT
ACATGCAGAAAATGTCTTTGCTCGAAATGATAATGCCAAAATATAACTTTATATATAATTTGCATTTAGTACAT
TTTTGGTTAAAAAATAAATAAATAAGTGAAGTCATCAGC

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FIGURE 4

MYRISQLMSTPVASSSRLEREYAGELSPTCIFPSFTCDSLDGYHSFECGSIDPLTGSHYTCRRSPRLLTNGYYIW
TEDSFLCDKDGNIITLNPSTSVMYKENLVSTSKSWLHGSIFGDINSSPSEDNWLKGTRRLDTDHCNGNADDLDCS
SLTDDWESGKMNAESVITSSSSHIISQPPGGNSHSLSLQSQLTASERFQENSSDHSETRLLQEVFFQAILLAVCL
ITSACARWFMGEILASVFTCSLMITVAYVKSFLSLASYFKTTACARFVKI

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FIGURE 5

GC GCGGGGGCCCGAGCCGCTCAGTCTCCCTGCTCTCCGTGGTCCCGGCTCGCGTGTAGCGGCGGCGGGCGGTCT
CCGGTGAGGAGGCGCGCGGGGCCATGACGTACGCTCCACAAAGGTCGGAGAGATCTTCTCGGCGGCGGGCGCCG
CCTTCACGAAGCTCGGGGAGCTGACGATGCAGCTGCATCCCGTGGCCGACTCTTCTCCTGCGGGCGGAAGTGGA
CGGAGACGGAAATAGAGATGCTGAGGGCTGCTGTGAAGCGATTGGGGACGATCTTAATCACATCAGCTGTGTCA
TCAAGGAACGGACAGTGGCCAGATAAAGGCCACTGTGAAACGCAAGGTATATGAAGATTCTGGCATCCCCCTTC
CAGCTGAGTCACCCAAGAAAGGGCCCAAGAAGGTGGCATCTGGTGTCTTGTCACCTCCTCCAGCTGCCCCCTCCTC
CCAGCAGCTCCAGTGTCCCTGAGGCCGGGGGTCCCCCATAAAGAAACAGAAGGCTGATGTGACACTCAGTGCTC
TGAACGACTCCGATGCCAACAGTGACGTGGTGGATATTGAAGGGCTAGGAGAACTCCTCCAGCTAAGAACTCA
ACTTCGACCAGGACAGCCTGACCCTGGATTCTGGCCTTCTCATGACCTCTGCTGATCCTCCTCTCCTCTCCTGCT
GAGCCTTCCACCTCTGACCTCTCACTGTTTCATGCCGGACCTGTGGATCTCCTGGGACTCCGAGCAAGGCCTGCAC
GAGAGAGGGCTGAAAGGCTGCTGGGGCTGCCACCTCGCTATTCCCGCATAAGCATCTGCCCCCAACCCCTTTGAC
CTTCATCTGATGGACATTTTTATACAGAAAACAATAAAGATTTCCTCTCAGCTT

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FIGURE 6

AGARAAQSPCSPWSRLACSGGGGVSGEEARGAMTSASTKVGEIFSAAGAAFTKLGELTMQLHPVADSSPAGAKWT
ETEIEMLRAAVKRFGDDLNHISCVIKERTVAQIKATVKRKVYEDSGIPLPAESPCKGPKKVASGVLSPPPAAPP
SSSVPEAGGPPIKKQKADVTLNLSALNDSANDVVDIEGLGETPPAKKLNFDQSLTLDGGLMTSADPPLLSC

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FIGURE 7

AAAAAAAAACAAAAACAAAACAAAAAAACCTTCCAAAAGAAGTTTGAGATAATTTTATGTTTAGAAAAATTAG
AAATTGGATTGAGTAAAATTTACATATTTTACACAAGAGGACTAACATCTTTATAATATTTAACCTTTCAGTAAA
TTTATGTTTTATGTTTCTCAGCCTATCTTTTCTAGTATAGGTGATTTTTTTTAGTGTGGTTACTATTGTAAATGAG
ATCCTACTACTTTAAAAAATGAAAATTAAATCTATCGCTTTTATGACTTTAAAACATTAGACTTATGTAAGTGTA
AACATTATTTAAAAACATAATGTAGAAAATTAAAGTCCCCCATAATTAAAATCCCTTTCCCCCAGAAAAAGTCAA
CAGCATATTCATCAGTTTTTTCCTAAAGTATGTTT TAGCACTTTGACCATATGAGACAACCCTTCTGCTGTTAGC
ATTTTTCTCTTTGCAATAGATCTTCTATGTCAGTACACATCAATCTACCTCATTCTTACCTCTGCATAAGAGAG
TAGTGTGTAGTTGTATAATAGTTTAACTTGGCGATTGGTTATTGATTTTGTAAGTAGCCAGTTACTGAATTATTC
TAAAGGTTTTGCTGTTGTTAATTTCTTTTCGCTTTTTCAGTTGGGTAATAGTTCTGGGTAGGTTGATAATTTTAT
TCCCATATTTGTAATCTTATTTCACTTTCTCAACTCATCACATTGACTGGTACTTTTAGAACAATGTTAAAAAAC
ATTTACATAATTGTGCTGATATTGTACATTATTTGATATATATATATTTTTTTTACTTAGAAGAGTGTCTCCA
AAACTATAAATTTGACTCTTAGTGTAATAATCTTAATATTTGAATTATACATTCAGGTTATGCCCTCTATTTT
TAGTTTGATGAAAATATTATTAGTAATGGATGTTGGGGTTTTATTAAATGGCTTTTTTCCACATCTGTCAAGATG
ATCAACTGGCTTTTCTCTATTATGACTTTAGATGAATCGTTTTAATAGATTTGCTAATGTTAAGACATCTCTGCA
TTTCTACAAGAATCTGATGTAGTCATAGTATACTATTCTTTTAAATATACATCTCCTTTCAATGTTAACAGTGGTT
ATTTATGATTGGTTGGTCCATAGTAGATTTTATT TTGTGTTTCTTATCTGTACTTTCTGATTTTTCTACAAAGA
TTGTGTATTACTTGTATAATAAAAATAAGAGCTTTAAATTGTGAAATTCTTCTGGATTTGGTTTTCTCATTTTAT
TATGGAATTTTTCATA

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FIGURE 8

GGCACGAGGCAAAGAGCTGCCTAAAGAACTGGTAGCTGGAGCAAAGTGCAGAGATCAAGATGACCCTAGTCCAC
GGAACCAGCAGCCCAGGTCAGCCACATTCAGGAGCACCACCGAGGCACGGCAGGGAGAGCAAAGTTGCTGGCCCC
AATCATTCCCTCCTTTTCAGGGCAGGAGAGGCAGAAGCTCACTCTTTAGACATGTTCTTGATGGTCTTGTGCTCTT
TCATGGCCTTCTCCCAATCGCTGCCATTGAATTCCCTCAGTGACCATACTCCGCACAGTGCCCTCATCCAGGCAGT
GGGGGGCAATTCCGAAGCCTCCGGGGTTTGATCGTGGAGTATAGAAGCTCTGAACGCCACATCTCTTACAGAAGG
TATGCTGGGCTTTGTGAGTATTGAACGTGTAAGTCGTTATGTGCTCAGCTCCCTTCAGGAGCTTGAAGCGAGAAG
CCTGGAACAATGAAGTGTCTATTCTGCTTCTTCTTGCNAATGCTGCAACTACAGAAAGACAGAGCAAATTCCAG
ATTG

FIGURE 9

[illegible]

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FIGURE 10

MPVAVGPYQSQPSCFDRVKMGFVMGCAVGMAAGALFGTFSCLRIGMRGRELMGGIGKTMQSGGTFGTFMAIGM
GIRC

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FIGURE 11

AGACTCCCTGTCTTTGCGGTTTGGGAGATCATGAGAAACCACAGAATTGCTAGTAGTTTATGTGGAGATCAGGTC
TTCTCCAAGAAAAAAGAAAAAACAACATGGCTGCAAAGGAGAACTGGAGGCAGTGTTAAATGTG
GCCCTGAGGGTGCCAAGCATCATGCTGTTGGATGTCCTGTACAGATGGGATGTCAGCTCCTTTTTCCAGCAGATC
CAAAGAAGTAGCCTTAGTAATAACCTCTTTTCCAGTATAAGTATTTGGCTCTTAATATGCATTATGTAGGTTAT
ATCTTAAGTGTGGTGCTGCTAACATTGCCAGGCAGCATCTGGTTCAGCTTTATCTATATTTTTTACTGCTCTG
CTCCTCTATGCTGGACATCAAATTTCCAGGGACTATGTTCCGGAGTGAACCTGGAGTTTGCCTATGAGGGACCAATG
TATTTAGAACCTCTCTCTATGAATCGGTTTACCACAGCCTTAATAGGTCAGTTGGTGGTGTGTACTTTATGCTCC
TGTGTCATGAAAACAAAGCAGATTTGGCTGTTTTTTCAGCTCACATGCTTCCTCTGCTAGCACGACTCTGCCTTGTT
CCTTTGGAGACAATTGTTATCATCAATAAATTTGCTATGATTTTTTACTGGATTGGAAGTTCTCTATTTTTCTTGGG
TCTAATCTTTTGGTACCTTATAACCTTGCTAAATCTGCATACAGAGAATTGGTTCAGGTAGTGGAGGTATATGGC
CTTCTCGCCTTGGGAATGTCCCTGTGGAATCAACTGGTAGTCCCTGTTCTTTTCATGGTTTTCTGGCTCGTCTTA
TTTGCTCTTCAGATTTACTCCTATTTTCACTACTCGAGATCAGCCTGCATCACGTGAGAGGCTTCTTTTCTTTTT
CTGACAAGTATTGCGGAATGCTGCAGCACTCCTTACTCTCTTTTGGGTTTGGTCTTCACGGTTTTCTTTTGTGGCC
TTGGGTGTTCTCACACTCTGCAAGTTTTTACTTGCAGGGTTATCGAGCTTTTCATGAATGATCCTGCCATGAATCGG
GGCATGACAGAAGGAGTAACGCTGTTAATCTGGCAGTGCAGACTGGGCTGATAGAAGTGCAGGTTGTTTCATCGG
GCATTCTTGCTCAGTATTATCCTTTTTCATTGTCGTAGCTTCTATCCTACAGTCTATGTTAGAAATTGCAGATCCT
ATTGTTTTTGGCACTGGGAGCATCTAGAGACAAGAGCTTGTGAAACACTTCCGTGCTGTAAGCCTTTGTTTATTT
TTATTGGTATTCCCTGCTTATATGGCTTATATGATTGCGAGTTTTTCCACATGGATTTTTTGGCTTCTTATCATT
ATTTCCAGCAGCATTCTTACCTCTCTTCAGGTTCTGGGAACACTTTTTATTTATGTCTTATTTATGGTTGAGGAA
TTCAGAAAAGAGCCAGTGGAAAACATGGATGATGTATCTACTATGTGAATGGCACTTACCGCCTGCTGGAGTTT
CTTGTGGCCCTCTGTGTGGTGGCCTATGGCGTCTCAGAGACCATCTTTGGAGAATGGACAGTGTATGGGCTCAATG
ATCATCTTCATTTCCTACTATAACGTGTGGCTTCGGGCCAGCTGGGGTGGAAAGAGCTTTCTTCTCCGCAGG
GATGCTGTGAATAAGATTAAATCGTTACCCATTGCTACGAAAGAGCAGCTTGAGAAACACAATGATATTTGTGCC
ATCTGTTATCAGGACATGAAATCTGCTGTGATCACGCCTTGCACTCATTTTTTCCATGCAGGCTGTCTTAAGAAA
TGGCTGTATGTCCAGGAGACCTGCCCTCTGTGCCACTGCCATCTGAAAACTCCTCCCAGCTTCCAGGATTAGGA
ACTGAGCCAGTTCTACAGCCTCATGCTGGAGCTGAGCAAAACGTCATGTTTCAGGAAGGTACTGAACCCCCAGGC
CAGGAGCATACTCCAGGGACCAGGATACAGGAAGGTTCCAGGGACAATAATGAGTACATTGCCAGACGACCAGAT
AACCAGGAAGGGGCTTTTGACCCCAAAGAATATCTCACAGTGCAGAAAGATGAAGCACATCCTGTTGAATCAGCC
TAGAGGAGAAGCAGCAGGAATGATGCTTTGATACTCTGGAGGAGAAGTTAACTCAAGATGGAATTCATGTTCTGA
TTTGAGGAATGAAAATGAGATGATCAGGCAGGAAAAGTACATTCCAAGGATCTAATCCAGGAAGTACTCTCAGTG
GGGACCACCTGCTTTTCATCCCCTGACATTGTGGGAGAAAATTTTGCAATGTATGCTAATCAAAATGTATTTATATG
TTCTCTGCTGATGTTTTATAGAGGTTTGTGAAGAAAATTCACCTCAGCAACTTCAGAAACTGCCCTGATACGT
GTGAGAGAGAAATAAAATCAGATTTTGTGTTGAAGGGACTGAGGAAGTGAGGATAAAGAGCATGAGGACAGCA
TGGAAAAGAAGGAGGCAGAAGTGAAGTGAACCTTTCCTCTCCATGGGACAGATCAATCTCATTATCAAGTCTGAA
TAGCAACCAGCCCTCTCCTCCACCCCGTTTCTCCTCAGTTAATTGGAGCTCAGTCAGGTGATTATTGAGTCTTGT
ACAGCACTGAAATGAAATCAAAGATGAAGAAGCATGATTGTATTTCGAAGATTGAAGCACGCTCATACTTTGTAT
GTGCTTTAGGGAAGGGGTGGGTGGGCCTTGGGCCCTGCGGGTGCATTTCATGTAATCTGAGACTCTTGAACCTTA
TGACGGAGTCTTCAATATTTTGTATATATGAAACCTTTGTTAAATATGTTGTATACTTCGCTGGCTGTGTGAAG
TAACTAAAACCTCTGATGAACACTTTGGAGTCTGCTTTAGTGAAGGAGACCAAAGTGGGAAGGGCTTTAGGGCAC
TGATAGAGGCCCTGGGTGTACTTTTCAATCCTGTGTAATGTTTAAATCTTGCAACTGAATCAAAACAGTGTTAA
TTATGGCAATATTTGCACCTTTTGGGAATGAGTACATAACTGTATGATCACACTCTGCAAATGCCACTTTTAAAGCT
GTTAATAGACTTTGCACCTTTTCTTTGACAAGGATGTGTCATATTTAAATTTTTTACATTCATCATGGCTACAGGT
AGAACTGGGGAGGGGGGAATGTAATTTTTTATGGGAATTTTGATATGAAAAGAACTAGTCATTTATTTATACAA
TAGGCTTGGCTCAAAAAGTGTTTTTTCAGACCTCGGTATTCCTAATGTGGGATGTGACTTTATTTTATTTTATAGTA
GCAAATTTGGATGTAGACTGACAGACATAGCTGAAATGTCCTTAATAAATTTAAATTTGAAGAT

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FIGURE 12

MMRNHRIASSLCGDQVFSKKKKKKKKNNMAAKEKLEAVLNVALRVPSIMLLDVLYRWDVSSFFQQIQRSSLSNNP
LFQYKYLALNMHYVGYILSVVLLTLPRQHLVQLYLYFLTALLLYAGHQISRDYVRSELEFAYEGPMYLEPLSMNR
FTTALIGQLVVCTLCSCVMKTKQIWLFSAHMLPLLARLCLVPLETIVIINKFAMIFTGLEVLVFLGSNLLVPYNL
AKSAYRELVQVVEVYGLLALGMSLWNQLVVPVLFMVFWLVLFALQIYSYFSTRDQPASRERLLFLFLTSIAECCS
TPYSLGLVFTVSFVALGVLTLCCKFYLGYRAFMNDPAMNRMTEGVTLILLAVQTGLIELQVVHRAFLLSIILF
IVVASILQSMLEIADPIVLALGASRDKSLWKHFRAVSLCLFLLVFPAYMAYMICQFFHMDFWLLIISSSILTSL
QVLGTLFIYVLFMVVEEFRKEPVENMDDVIYYVNGTYRLLLEFLVALCVVAYGVSETIFGEWTVMGSMIIFIHSYNN
VWLRAQLGWKSFLLRDAVNKIKSLPIATKEQLEKHNDICAICYQDMKSAVITPCSHFFHAGCLKKWLYVQETCP
LCHCHLKNSSQLPGLGTEPVLQPHAGAEQNVMFQEGTEPPQEHTPGTRIQEGSRDNNEYIARRPDNQEAFDPK
EYPHSAKDEAHPVESA

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FIGURE 13A

TGAATTCGTGAGAGACTTGAGGGAGGCGCTGCGACTGACAAGCGGCTCTGCCCCGGGACCTTCTCGCTTTCATCTA
GCGCTGCACTCAATGGAGGGGCGGGCACCAGTGCCTTAATGCTGTCTTAACTAGTGTAGGAAAACGGCTCAACC
CACCGCTGCCGAAATGAAGTATAAGAATCTTATGGCAAGGGCCTTATATGACAATGTCCCAGAGTGTGCCGAGGA
ACTGGCCTTTTCGCAAGGGAGACATCCTGACCGTCATAGAGCAGAACACAGGGGGGACTGGAAGGATGGTGGCTGTG
CTCGTTACACGGTCCGCAAGGCATTGTCCCAGGCAACCGGGTGAAGCTTCTGATTGGTCCCATGCAGGAGACTGC
CTCCAGTCACGAGCAGCCTGCCCTCTGGACTGATGCAGCAGACCTTTGGCCAACAGAAGCTCTATCAAGTGCCAAA
CCCACAGGCTGCTCCCCGAGACACCATCTACCAAGTGCCACCTTCTTACCAAAATCAGGGAAATTTACCAAGTCCC
CACTGGCCACGGCACCCAAGAACAAGAGGTATATCAGGTGCCACCATCAGTGCAGAGAAGCATTGGGGGAACAG
TGGGCCCCACGTGGGTAAAAAGGTGATAACCCCCGTGAGGACAGGCCATGGCTACGTATACGAGTACCCATCCAG
ATACCAAAAGGATGTCTATGATATCCCTCCTTCTCATACCACTCAAGGGGTATACGACATCCCTCCCTCATCAGC
AAAAGGCCCTGTGTTTTTCAGTTCCAGTGGGAGAGATAAAACCTCAAGGGGTGTATGACATCCCGCCTACAAAAGG
GGTATATGCCATTCCGCCCTCTGCTTGCCGGGATGAAGCAGGGCTTAGGGAAAAAGACTATGACTTCCCCCTCC
CATGAGACAAGCTGGAAGGCCGGACCTCAGACCGGAGGGGGTTTATGACATTCCCTCCAACCTGCACCAAGCCAGC
AGGGAAGGACCTTCATGTAAATACAACTGTGACATTCCAGGAGCTGCAGAACCAGGTGGCTCGAAGGCACCGAG
CCTGTCCCCGAATCACCCACCCCGCAACTCGGACAGTCAGTGGGCTCTCAGAACGACGCATATGATGTCCCCCG
AGGCGTTCACTTTCTTGAGCCACCAGCAGAAACAGTGAAGAAACCAACCCCGAGGAAAGGGATGGTGTATGA
TGTCCCTCTGCATAACCCGCCAGATGCTAAAGGCTCTCGGGACTTGGTGGATGGGATCAACCGATTGTCTTTCTC
CAGTACAGGCAGCACCCGGAGTAACATGTCCACGTCTTCCACCTCCTCCAAGGAGTCTCACTGTACGCTCCCC
AGCTCAGGACAAAAGGCTCTTCTGGATCCAGACACAGCTATTGAGAGACTTCAGCGGCTCCAGCAGGCCCTTGA
GATGGGTGTCTCCAGCCTAATGGCACTGGTCACTACCGACTGGCGGTGTTACGGATATATGGAAGACACATCAA
TGAAATACGCACAGCAGTGGACAAGGTGGAGCTGTTCCTGAAGGAGTACCTCCACTTTGTCAAGGGAGCTGTTGC
AAATGCTGCCTGCCTCCCGAACTCATCTCCACAACAAGATGAAGCGGGAGCTGCAACGAGTGAAGACTCCCA
CCAGATCCTGAGTCAAACAGCCATGACTTAAATGAGTGCAGCTGGTCCCTGAATATCTTGGCCATCAACAAGCC
CCAGAACAAGTGTGACGATCTGGACCGGTTTGTGATGGTGGCAAAGACGGTGGCCGATGACGCCAAGCAGCTCAC
CACAACCATCAACACCAACGCAGAGGCCCTCTTCAGACCCGGCCCTGGCAGCTTGCATCTGAAGAATGGGCCGGA
GAGCATCATGAATCAACGGAGTACCCACACGGTGGCTCCCAGGGACAGCTGCTGCATCCTGGTGAACACAAGGC
CCAGGCCCAACAAGGCACTGCCCCCAGGCCTGAGCAAGGAGCAGGCCCTGACTGTAGCAGCAGTGATGGTTC
TGAGAGGAGCTGGATGGATGACTACGATTACGTCCACCTACAGGGTAAGGAGGAGTTTGAGAGGCAACAGAAAGA
GCTATTGGAAAAAGAGAATATCATGAAACAGAAACAAGATGCAGCTGGAACATCATCAGCTGAGCCAGTTCCAGCT
GTTGGAACAAGAGATTACAAAGCCCGTGGAGAATGACATCTCGAAGTGAAGCCCTCTCAGAGCCTACCCACCAC
AAACAGTGGCGTGAGTGTCTCAGGATCGGCAGTTGCTGTGCTTCTACTATGACCAATGTGAGACCCATTTTCATTTT
CCTTCTCAACGCCATTGACGCACTCTTCAGTTGTGTGCTCAGCTCAGCCAGCCCCCGCAATCTTCGTGGCACACAG
CAAGTTTGTATCCTCAGTGCACACAACTGGTGTTCATTGGAGACACGCTGACACGGCAGGTGACTGCCAGGA
CATTGCAACAAAGTCATGAATCCAGCAACCAGCTCTGCGAGCAGCTCAAGACTATAGTCATGGCAACCAAGAT
GGCCGCCCTCCATTACCCACAGCACACGGCCCTGCAGGAAATGGTGCACCAAGTGACAGACCTTTCTAGAAATGC
CCAGCTGTTCAAGCGCTCTTTGCTGGAGATGGCAACGTTCTGAGAAGAAAAAAGAGGAAGGGGACTGCGTTAA
CGGTTACTAAGGAAAACCTGGAATACTGTCTGGTTTTTGTAAATGTTATCTATTTTTGTAGATAATTTTATATAA
AAATGAAATATTTTAAATTTTATGGGTGAGACAACCTTCAGAAATTCAGGGAGCTGGAGAGGGAATCTTTTTT
TCCCCCTGAGTGTCTTATGTATACAGAAATCTGAGACATAAACTGTACAGAAAACCTGTCCACGTCCTT
TTGTATGCCCATGTATTATGTTTTTGTGTGTAGATGTTTGTCTGATGCATTTTCAATAAAAAAAACCATGAAT
TACGAAGCACCTTAGTAAGCACCTTCTAATGCTGCATTTTTTTTGTGTGTGTAAAAACATCCAGCTGGTTATAA
TATTGTTCTCCACGTCTTGTGATGATTCTGAGCCTGGCAATCTGGGAAGCATAGTTTATTTGCAAGTG
TTCACCTTCAAATCATGAGGCATAGCATGACTTATCTTGTGTGTGAAAACCTTTTTCAAACTGACCATCTTAA
ACACATGATGGCCAAGTGCCACAAAGCCCTCTTGCAGGAGACATTTACGAATATATATGTGGATCCAAGTCTCGAT
AGTTAGGCGTTGGAGGGAAGAGAGACCAGAGAGTTTAGAGGCCAGGACCACAGTTAGGATTGGGTTGTTTCAATA
CTGAGAGACAGCTACAATAAAAGGAGAGCAATTGCCCTCCCTGGGGCTGTTCAATCTTCTGCATTTGTGAGTGGTT
CAGTCAAGAGGTTTTTCAAAAAGATGTTTTTAGAGTTGTAAAAACCATATTTGCAGCAAAAGATTTACAAAGGCGTA
TCAGACTATGATTGTTTACCAAAAATAGGGGAATGGTTTGTATCCGCCAGTTGCAAGTAGAGGCCTTTCTGACTCTT

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FIGURE 13B

AATATTCACTTTGGTGCTACTACCCCCATTACCTGAGGAACTGGCCAGGTCCTTGATCATGGAAGCTATAGAGCTA
CCAGACATATCCTGCTCTCTAAGGGAATTTATTGCTATCTTGACCTTCTTTAAAGCTCAAAAAACATATGCAGA
CCTGACACTCAAGAGTGGCTAGCTACACAGAGTCCATCTAATTTTGGCAACTTCCCCCCCCGAATTC

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FIGURE 14

MKYKNLMARALYDNVPECAEELAFRKGDILTVEQNTGGLEGWWLCSLHGRQGIVPGNRVKLLIGPMQETASSHE
QPASGLMQQTFGQQKLYQVPNPQAAPRDTIYQVPPSYQNQGIYQVPTGHGTQEQEVYQVPPSVQRSIGGTSGPHV
GKKVITPVRTGHGYVYEYPSRYQKDVIDIPPSHTTQGVYDIPPSSAKGPVFSVPVGEIKPQGVYDIPPTKGVYAI
PPSACRDEAGLREKDYDFPPPMRQAGRPDLRPEGVYDIPPTCTKPAGKDLHVKNCDIPGAAEPVARRHQSLSPN
HPPPQLGQSVGSQNDAYDVPRGVQFLEPPAETSEKANPQERDGVYDVPLHNPPDAKGSRDLDGINRLSFSSTGS
TRSNMSTSSTSSKESLSASPAQDKRLFLDPDTAIERLQRLQQALEMGVSSLMALVTTDWRCYGYMERHINEIRT
AVDKVELFLKEYLHFVKGAVANAACLPILHNMKRELQRVEDSHQILSQTSHDLNECSWSLNILAINKPQNK
DDLDRFVMVAKTVPDDAKQLTTTINTNAEALFRPGPSLHLKNGPESIMNSTEYPHGGSQGQLLHPGDHKAQAHN
KALPPGLSKEQAPDCSSSDGSERSWMDYDYVHLQKKEFERQQKELLEKENIMKQNMQLHHQLSQFQLLEQE
ITKPVENDISKWKPSQSLPTTNSGVSAQDRQLLCFYDQCETHFISLLNAIDALFSCVSSAQPPRIFVAHSKFVI
LSAHKLFIGDTLTRQVTAQDIRNKVMNSSNQLCEQLKTIVMATKMAALHYPSTTALQEMVHQVTDLSRNAQLFK
RSLEMATF

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FIGURE 15

AGCGAAGTGTGGTGGCTTCCAAGGAATACAAACATAAAGGCCTTCGACCGTTGCAAATAGACTAAAGTGAAAAACA
AATCTGAATGAAGATGAAGTTATTTTCAGACCATTTGCAGGCAGCTCAGGAGTTCAAAGTTTTCTGTGGAATCAGC
TGCCCTTGTGGCTTTCTCTACTTCCTCTTACTCATGTGGCCGGAAGAAAAAGTGAACCCATATGAAGAAGTGGA
CCAAGAAAAATACTCTAATTTAGTTTCAGTCTGTCTTGTTCATCCAGAGGCGTCGCCCAGACCCCGGGATCGGTGGA
GGAAGATGCTTTGCTCTGTGGACCCGTGAGCAAGCATAAGCTGCCAAACCAAGGTGAGGACAGACGAGTGCCACA
AAACTGGTTTTCTATCTTCAATCCAGAGAGAAGTGATAAACCAATGCAAGTGATCCTTCAGTTCCTTTGAAAAAT
CCCCTTGCAAAGGAATGTGATACCAAGTGTGACCCGAGTCCTTCAGCAGACCATGACAAAACAACAGGTTTTCTT
GTTGGAGAGGTGGAACAGCGGATGATTCTGGAACGGGAGAAGATGGCTTTAAAGAATACACTTCAAACGTCTT
TTTACAAGGGAAACGGTTCCACGAAGCCTTGGAAGCATACTTTCACCCCAGGAAACCTTAAAGAGAGAGATGA
AAATCTCCTCAAGTCTGGTTACATTGAAAGTGTCCAGCATATTCTGAAAGATGTCAGTGGAGTGCGAGCTCTTGA
AAGTGCTGTTCAACATGAAACCTTAAACTATATAGGTCTGCTGGACTGTGTGGCTGAGTATCAGGGCAAGCTCTG
TGTGATTGATTGGAAGACATCAGAGAAACCAAGCCTTTTATTCAAAGTACATTTGACAACCCACTGCAAGTTGT
GGCATAACATGGGTGCCATGAACCATGATACCAACTACAGCTTTCAGGTTCAATGTGGCTTAATTGTGGTGGCCTA
CAAAGATGGATCACCTGCCCACCCACATTTTCATGGATGCAGAGCTCTGTTCCAGTACTGGACCAAGTGGCTTCT
TCGACTAGAAGAATATACGGAAAAAGAAAAAGAACCAAGATATTTCAGAAACCAGAAATATTTCAGAAATAGGGGAGCAAG
TTGCTATTTGGGAACATTCAGCACCTTCTCACAGTTTGGGAACATATATTGCTGTTTACTCCAGTGTAAAAATGA
GGTGCCACTGGATCTGAGTGCTACACGAACACAAGTAGAAGTATTAATTTGTTGAAATGTGTTGTTACCAAAAAG
ACTGAAAAGCCCCAAAGTCTAGATATAAAGACCTAGACTTCGGGCACGCGAAATCCCAGCTATGCTACCTCTTATT
TACCTGAAAGGAGGACACGCAGGATGGGCAGTCATGCTGGTGACTCTTGTACTCCCTTGAGGGACATTGGGGGGG
GGGGGGCGTGGTCCCAGGCAGGATGCCCAGTCTTTGAGCTGAGATTGGAAGGCAGTGAGGCTGAGGGTGCCAAGA
TTTCCCCAGGGTTACCCAGAGGGGAAGGGGCTACATGCCCCAGCTGTGTGCAGGGAGGACACATCAGCCCACT
ACCGCTGCCAACACCAATGCCTAAAACCTTGTTTCATACATTGGGGTTTTCTATATATTTTCAGCTGGGAAAAGCTT
ACATTTAACCTTTTGAAAAATAAATACGTGATTAGCCTCAACTAACATTGCTGACTATAAAGACAGTATATTC
ACCATGTCGCTGGCAATATGTCATTGCGTAACACCAATAACCCCCAGAAGTAGCCAGAGGCCAGTTTGAACAT
CACAATTCTAAGTGTTTTAGTAACATTTCTGGCGTGAGTCAACAGATCATGTAGATAGAGTCAATTATTGTTTG
TGGAGTTTTTCAGCTATAGGGGAGGGGAACATTTAAATCCATTTGTTTCTATTCAATAGGTAATAAAAATTAGT
TGTCCCTGGGTTTTGGGAAACTTAAATGCCCATTACAGCCCTGGGGAAGGGTTTTCTGTCTTATGGAGTGAGTCTT
AGCATTTAAGTTATACAGTTGCTGCCTTAAATAGTAGCCTGCTACAATGACTTCTTTGGGTAGCCATTTTCATA
AGAAATAAAATACAAGATATGAGTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 16

MKMKLFQTICQLRSSKFSVESAAALVAFSTSSYSCGRKKKVNPYEEVDQEKYSNLVQSVLSSRGVAQTPGSVEED
ALLCGPVSKHKLPNQGEDRRVPQNWFPINFNPERSDKPNASDPSVPLKIPLQNVIPSVTRVLQQTMTKQQVFLE
RWKQRMILELGEDGFKEYTSNVFLQGKRFHEALESILSPQETLKERDENLLKSGYIESVQHILKDVSGVRALESA
VQHETLNYIGLLDCVAEYQGKLCVIDWKTSEKPKPFIQSTFDNPLQVVAYMGAMNHDINYSFQVQCGLIVVAYKD
GSPAHPHFMDAELCSQYWTKWLLRLEEYTEKKKNQNIQKPEYSE

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FIGURE 17

GGCATTCCCTGGCAGAGGGAACAGCATGCCAAGCGTGAGAAGGCTCAGAGTAAGGAGGTTAAGAGCCCAAGTATTG
GAGCCTACAGTTTTGCCCTTCCATGCAGTGTGACAGTGGGCAAGTTCCTTTCCCTCTCTGGGTCTCAGTTCTGT
CCCCTGCAAAATGGTCAGAGCTTACCCCTTGGCTGTGCAGGGTCAACTTTCTGACTGGTGAGAGGGATTCTCATG
CAGGTTAAGCTTCTGCTGCTCCTCCTCACCTGCAAAGCTTTTCTGCCACTTTTGCCTCCTTGAAAACTCTTATC
CATCTCTCAAACTCCAGCTACCACATCCTTGCAGCCTTCCCTCATATACCCCACTACTACTGTAGCCCTGTCC
TTCCCTCCAGCCCCACTCTGGCCCTGGGGCTGGGGAAGTGTCTGTGTCCAGCTGTCTCCCCTGACCTCAGGGTTC
CTTGGGGGCTGGGCTGAGGCCTCAGTACAGAGGGGGCTCTGGAAGTGTTTGTTGACTGAATAAAGGAATTCAGTG
GAAAAAAAAA

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FIGURE 18

AACATGTAAGACTACTGTTTACAATTGACATTTTCCTTTCAAACACATTTTTCATGAATATATTATAGGAAAG
TTAAAACCATCTCTATTCTAAAAGGAAAATCTACCATTTTGCTCAGAGAGAAAAGTTACTGAGTTTGTCTATGTGA
TTTTAAGTAGTATTGATTAGAGTATTAAAGAAATGGGGTACTTCAAGTAACATAACACCTGATATTTAAATCTAA
GTTTTAAAAATGATTTTACCCATTGTTAATGAAAGTGTTTCTAAGATGTAACCCCTGGTTAGCTATTCCGTCTT
CTTGCCTTGATGGGTGACTGGTGGTGAATGTGCTGTTGTCATTCCATTGACAGTTCGGGATTTGTGGTGGTCTC
AGCATATTAGCATAGATGTGAGTTGTAATTTATAGGATTATGGAACGTAAATTGTGGAACCTCCTGCAGGGCAGA
CTCTGGAGGCTAGCTTTTTAGAAAACATAAACCTCCAGTATAAACTTAATTTCTGTCATTTGCCCATTTTCTTG
AAAGTTAAGTGCCAGAAAAGAAAAGGATCGAGTCTCTCTTTTCTTCTACAATAAAACAGAATATACTTTCTCCA
GGGTGGTGGTGGGTTCCTTTTTCTGTTGAGGTGGATTCTGAGATTGAGGAGGGGCTGGAGAAGACAGAGCATG
AGGGAAAGAGACTGAGAACATACTCAGGCTGCCCTCGCCTCCTTTCCCTTTCGTGCTCCTGTCTCCCATCTAGG
AGGACCAGGGCTACCAGTCCTTGTTGGGGACAAGTTTGAGTAGGATCAAGAGACATGTACTGCGCCAGGGCCGTGG
GTTACAACGTGAATCC

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FIGURE 19

MKVFLRCNPWLAIPSSCLDGLTGGECAVVIPLTVRDLWWSQHISIDVSCNFIGLWNCNCGTPAGQTLASFLN

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FIGURE 20

CGCTAAGCGTCCCAGCCGCATCCCTCCCGCAGCGACGGCGGGCCCGGGACCCGCGGGCTGTGAACCATGAACACCC
GCAATAGAGTGGTGAACCTCCGGGCTCGGCGCCTCCCTGCCTCCCGCCCGACCCGGGATCCCCAGGACCCCTTCTG
GGCGGCAAGGGGAGCTGAGCCCCGTGGAAGACCAGAGAGAGGGTTTGGAGGCAGCCCCTAAGGGCCCTTCGCGGG
AGAGCGTCGTGCACGCGGGCCAGAGGCGCACAAAGTGCATACACCTTGATAGCACCAAATATAAACCGGAGAAATG
AGATACAAAGAATTGCGGAGCAGGAGCTGGCCAACCTGGAGAAGTGGAAAGGAGCAGAACAGAGCTAAACCGGTTT
ACCTGGTGGCCAGACGGCTAGGTGGAAGCCAGTCAGAACTGAAGTCAGACAGAAACAACAACCTCCAGCTGATGC
AATCTAAATACAAGCAAAAGCTAAAAAGAGAAGAATCTGTAAGAATCAAGAAGGAAGCTGAAGAAGCTGAACTCC
AAAAATGAAGGCAATTCAGAGAGAGAAGAGCAATAAACTGGAGGAGAAAAAAGACTTCAAGAAAACCTTAGAA
GAGAAGCATTTAGAGAGCATCAGCAATACAAAACCGCTGAGTTCTTGAGCAAACTGAACACAGAATCGCCAGACA
GAAGTGCCGTGTCAAAGTGCTGTTTGTGGCCCAAAATCCTCAACATGGGCCAGAAGCTGGGCTTACAGAGATTCTC
TAAAGGCAGAAGAAAACAGAAAATTGCAAAAGATGAAGGATGAACAACATCAAAAGAGTGAATTACTGGAAGTGA
AACGGCAGCAGCAAGAGCAAGAAAGAGCCAAAATCCACCAGACTGAACACAGGAGGGTAAATAATGCTTTTCTGG
ACCGACTCCAAGGCAAAAGTCAACCAGGTGGCCTCGAGCAATCTGGAGGCTGTTGGAATATGAATAGCGGTAAACA
GCTGGGGTATATGAGAAAATATTGACTCCTATCTGGCCTTCATCAACTGACCTCGAAAAGCCTCATGAGATGCTT
TTTCTTAATGTGATTTTGTTCAGCCTCACTGTTTTTACCTTAATTTCAACTGCCCACACACTTGACCGTGCAGTC
AGGAGTGACTGGCTTCTCCTTGTCCTCATTTATGCATGTTTGGAGGAGCTGATTCCTGAACTCATATTTAAACTC
TACTGCCAGGGAAATGCTACATTATTTTTCTAATTGGAAGTATAATTAGAGTGATGTTGGTAGGGTAGAAAAAGA
GGGAGTCACTTGATGCTTTTCAAGTTAATCAGAGCTATGGGTGCTACAGGCTTGTCTTTCTAAGTGACATATTCTT
ATCTAATTCTCAGATCAGGTTTTTGAAAGCTTTGGGGGTCTTTTATGATTTTAAATCCCTACTTTCTTTATGGTACA
AATATGTACAAAAGAAAAGGTCTTATATTCTTTTACACAAATTTATAAATAAATTTTGAACCTCCTTCTGTAAAA
AAAAAAA

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FIGURE 21

MNTRNRVVNSGLGASPARPTRDPQDP SGRQGELSPVEDQREGLEAAPKGPSRESVVHAGQRRTSAYTLIAPNIN
RRNEIQRIAEQELANLEKWKEQNRAKPVHLVPRRLGGSQSETEVRQKQQLQLMQSKYKQKLKREESVRIKKEAEE
AELQKMKAIQREKSNKLEKKRLQENLRREAFREHQYKTAEFLSKLNTE SPDRSACQSAVCGPQSSTWARSWAY
RDSLKAEENRKLQKMKDEQHOKSELLELKRQQEQERAKIHQTEHRRVNNAFLDRLQGKSQPGGLEQSGGCWNMN
SGNSWGI

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FIGURE 22

TTTTTTTCTAGAAAAACACAGCTTCTGTAATCTTTTCTCTTCTCTTTCCTGGAAATTAGAACAAATTTTTTGA
AGGAAGAAATATTGTCAACATTATAACCTTGAGTGAAGCATTATTACTTTAGTAAATATCTCGCTAAGATACTGA
ACATCAAAATTAATAATCAAACAACCTTCTAAATGTATTTATTTGCATTTTTATGCTGTGTACTTTTGAATATAGT
GATTTTATTATTTTTAGTAAATTTTCATGAAGTGTGTGTACTTTGGTTTCACACACTCAACACCATACCAATAA
TGAAATTATTAGTAATTTCAAGTTACTAATTGATTGGCTGTCATGTGCTATAAATGATAATGCCATCTGTGAACC
AGCAAGGCATAGACAGAATTGTTTGAAAAAAGCCTGATTAGTACCAGTTGCATTAATTCTAACTCCCCTAATTT
AGGACCTTTTTTTTCTTA

ATTTGGAAGATTTTGTTAIGGTGTCACCTGTCATTTTGACATACCCTATGGAATGCTTTGTGACAAGAGAGGTAAT
TGCCAATGTGTTTTTTGGTGGGAATCTTTCATCGGTTTTCCACATTGTTGTAACAGTGATGGTCATCACTGTAGC
CACGCTTGTGTCATTGCTGATTGATTGCCTCGGGA TAGTTCTAGAACTCAATGGTGTGCTCTGTGCAACTCCCCCT
CATTTTTATCATTCCATCAGCCTGTTATCTGAAAC TGTCTGAAGAACCAAGGACACACTCCGATAAGATTATGTC
TTGTGTCATGCTTCCCATGGTGTCTGTGGTGATGGTTTTTGGATTGCTCATGGCTATTACAAATACTCAAGACTG
CACCCATGGGCAGGAAATGTTCTACTGCTTTCCCTGACAATTTCTCTCTCACAAATACCTCAGAGTCTCATGTTCA
GCAGACAACACAACCTTTCTACTTTAAATATTAGTATCTTTCAATGAGTTGACTGCTTTAAAAATATGTATGTTTT
CATAGACTTTAAACACATAACATTTACGCTTGCTTTAGTCTGTATTTAIGTTATATAAAATTATTATTTTGGCT
TTTATCAAGACTTGGCTTTTATGAGTAGTGCAATA TAAAAGATAAAGAAAAGAAAAATTGATGTTTTCACCTTTA
ACTG

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FIGURE 24

FGRFCYGVTVILTYPMECFVTREVIANVFFGGNLSVVFHIVVTVMVITVATLVSLLDCLGIVLELNGVLCATPL
IFIIPSACYLKLSEEPRTSDKIMSCVMLPIGAVVMVFGFVMAITNTQDCTHGQEMFYCFPDNFSLTNTSESHVQ
QTTQLSTLNISIFQ

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FIGURE 25

GACCAGGCCTCCTGATTGTCCTTTTGTGGGCTATTCTATACTCTCTCTCATAAGTCCCACAAAAGTCTGAGGTAGAG
CACACGTTTCTATACACTGGCTTTTTATTCCCTAATTGAAAAGTAGTTTACTTTTTTAAGAAAGTGGTTTTTACTT
TATTCTTATCATCCTTTTCCAAGAGCTTTTACAGGCATAACTAATTTGACATCAGCAGAACTGATTCATCATCA
GGCCTAGGTTACTCACTACTGCTTCTCTTTGAAGTTGTGAGGCTGGGAGATGCACAACACCGACGAGGGAGATGT
GGTCACAGAGGCATGACAAAGTTCAAGCTTCAGAAAGTAGCCAATCTAATCAATATTCTCACGCTCAAGACAAAA
TTGATCAGTGTAACAGATATAGTAAGTTTCGTCCAGGTCACAGGAGTCAGTTTCACTCTCACATCTTGTCATTTC
AACGACGTGGGCTCCTCACTAAACAATGTTTGGCTTGAAGTAGATTCTATAGAGTTTTATTATGGACAATGTCC
AGTGTCATTGCCAATACTCTCCAAAATGATTTGAGCCATGAAGTACAGGGAGGAGAAGAGTATTTGTTGAACACT
TGTAATGAGTGCTTTTCTTCCATAATAGCACACATCTAGGTATTTTGCCCAATTTGCAGATGAGGCAAAAATTT
GGAGTATGAATTTCAAAGAAGTCGAACAGGCTAGATGAGTGCAGAGATGGAGAGTTAATCAAAGGGAGTCTGCTG
TAAACTCCTCCCACATGTGCAAATTGGCCAATATGAAAGCAATGAATATTTGACAAATTGAAGTTTTCTGCTAC
TTCACCAATTTTCTCAAGGGCTTTGATTTCAGTTTTCTATATCAGAAGGTAAAAGGCGAGAGGCTTCCATGGCTGC
CTGTCAACAGGGTTTGTGGAGAGAAGGGGCTGGGAACCCCTGGGCAAGCAGCACTTTCAGCAATAAACAGTATCCT
CAGGGGCCCCACAGAGGGAAGATGGTTTTCAGTGCCAAAGGCTTGAGTCCCCTTAATTTTTTTCATTCCACTTCACTC
ATCACCTGTCTCCTTTCTATGCTAGCAAAAAGAACAAATTATTCATAGATGGTAAAATTATTTATAGAGCCGGTGTA
ATTAAGAAAGAAAAAAGAAAAAGAAACACCTGATGCAAATTTCTTCCATTGCAAGGTGAGAAGATGAAAATCCA
AGTAGCTAAGTGGCTTTCTCAAGCTCACAAATCTATAATTCAGTCTCTTACATCTATCAGAAACATGTTCCGCCT
TATCCTGGTCTCTGAAAACAAAACATAGTGTCTCCAAAGCATTAAATGGTTTTTGTATGTTGATATAAAAAAGGA
CATGTCCCCAGAAATTATTTCCCTGCATAAACTTTAGAAAATGATGCTTGAAGGTCACTAGAAGTTGATTACTT
AATGACAGCCAGTAAGGTACAAACATACACAGAGCCAAATTTCTGGGAGATGAAAAATGGAAAAAATAACAGA
TTCAACCAGTGCTTCTTGTCAACACACTACTCTGAGATTTTTCTTATTTTAATCTTATGGTCTAGAGTAGTATTA
G

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FIGURE 26

AAGGGGTTCCAGTACTTCTCTACCCCTGGAAGAAGCAGAGAAGCACCTGAGGCAGGAGCCAGGGACCCAGCCCTAC
AACATCAGAGAAGACTCCATTCTGGACCAAAGGTTGCCCTGCTCAAGGCATAATGGGGCCACCCGTGGGCATCC
ACAGTTTGCAGGGTGTTCCGGAAGGTTCTTGTCAC TGTGATTGGATGCTGGATGCCGCCTGATAGACATGCTGGC
CTGGCTGAGAAACCCCTGAGCAGGTAACCCAGGGAAGAGAAGGAAGCCAGGCCTGGAGGTCCACGGCAGTGGGAG
TGGGGCTCACTGGCTTCCTGTGGGATGACTGGAAAATGACCTCGCTGCTGTTCCCTGGCATGACCCTCTTTGGAA
GAGTGGTTTGGAGAGAGCCTTCTAGAATGACAGAC TGTGAGAGGAAGCAGGGGCAGGGGTTTCCAGCCCGGGCTG
TGCAGGCATCCTGGGGCTGGCAGCACCTTCCCGGCTCACCAGTGCCACCTGCGGGGAGGGACGGGGCAGGCAG
GAGTCTGGGAGGCGGGTCCGCTCCTCTTGCTGCGGCATCTGTGCTCTCCGAGAGAAAACCAAGGTGTGTCAAAT
GACGTCAAGTCTCTATTTAAAAATAATTTTGTGTTTCTAAATGGAAAAAGTGATAGCTTTGGTGATTTTGTA
AGTCATAAATGCTTATTGTAAAAAATACAGGAAACCACCCCTCACCCTGTCCACTTGGGTGATCATTCCAGACCC
CTCCCCAAACATGCATATGTACCTGTCCGTGAGTGTGTGGATGTATGTTTACAGTTCTACATAAATGGGATCATT
TTATACATGGTGCTCTGGAACCCACATTTTTCATGCAGTCATTTGCAGTGAATTATTTATTGTGATAATAAATAG
CATTAGAATACAAAAAAAAAAAAAAAAA

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FIGURE 27

TTTAACTTTGCAACAGGTTTTTATTTTTGCTTTATATCTATTACAGTGTGTTGAAACCTAAAGAAATACATTTTC
TCTTCAAATTTGGATGTGTATATAAATAACATTTGTCTGGACTCAGCACACTCAATGCCATGTTTTCTTCGCCTA
TGCTGCTCTGAAATCAAGCTGTGTCTGTCTACCCAGGGGCCCTGAGAACATGGAAAATAGAGTTTATTGTTATT
AGAAAAATAAAAGCAAATGAATTTGCAAAGAAAAACCAGTGAGAAGGATTAGATTCATCTTCCAAGGGTCCATAG
CTGGTAACCCAAGCCATTCTCGGGGGATATCCAGTCTCTTGAGTGGCTGGGACTCCATTACCCACTTTCCTTCTT
TAATAGGTCAAAGGCAATCCACAAAAGCTGGCTAAAAAAGCCGACACCCAACCTCCAGAGTCTGAGGGTTCATG
AAGATGTGGACTTTTTTTTTTGGAGACAAGAG